

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 01 JUL 2005

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Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b>		See Form PCT/PEA/416
International application No. PCT/EP2004/002559	International filing date (day/month/year) 11.03.2004	Priority date (day/month/year) 21.03.2003	
International Patent Classification (IPC) or national classification and IPC A23F3/08			
Applicant UNILEVER PLC et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 1 sheets, as follows:</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand  09.07.2004		Date of completion of this report  04.07.2005	
<p>Name and mailing address of the International preliminary examining authority:</p> <p> European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016</p>		<p>Authorized Officer</p> <p>Koch, J</p> <p>Telephone No. +31 70 340-4307</p>	



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/002559

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on: *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

**Description, Pages**

1-18 as originally filed

**Claims, Numbers**

5-17 as originally filed

1-4 received on 02.02.2005 with letter of 31.01.2005

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/002559

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	1-17
	No: Claims	
Inventive step (IS)	Yes: Claims	1-17
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-17
	No: Claims	

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

1. Reference is made to the following document:

D1: WO 01/70038 A (UNILEVER PLC ;LEVER HINDUSTAN LTD (IN); UNILEVER NV (NL)) 27 September 2001 (2001-09-27)

2. The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (cf. example; claim 1) a method for preparing cold water soluble tea.
3. The subject-matter of claim 1 differs from this known method in that the tea leaves are treated before mid-fermentation with a pH-lowering agent, followed by treatment during fermentation by adding ascorbic acid, salts thereof or mixtures of ascorbic acid and salts thereof in an amount that is sufficient for the leaf tea to be infusible in water at 5 to 100 °C.  
The subject-matter of claim 1 is therefore new (Article 33(2) PCT).
4. The problem to be solved by the present invention may be regarded as the provision of a method that allows for preparing cold water soluble black leaf tea having superior product characteristics, i.e. a cold water soluble black leaf tea, which has a fast infusion rate and the infusion of which shows improved red colour and good flavour.
5. The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: the solution taught in the present application is not suggested in the prior art and is also considered as being not obvious to the skilled person.
6. Claims 2-17 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

## CLAIMS

1) A process for manufacturing a cold water soluble black leaf tea comprising the steps of

- 5 (a) optionally withering freshly plucked tea leaf,  
(b) macerating the leaves,  
(c) allowing the leaves to ferment,  
(d) firing the leaves to arrest fermentation and  
(e) then drying them to yield black leaf tea,

10 the process being characterised in that the tea leaves are treated before fermentation or before mid-fermentation with a pH lowering agent, followed by treatment during fermentation <sup>by adding</sup> with ascorbic acid, salts of ascorbic acid or mixtures thereof at mid-fermentation or later in an amount that is sufficient for the black leaf tea to be infusible in water at 5 to 100 °C.

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2) A process as claimed in claim 1 wherein the pH lowering agent is citric acid, salts of citric acid, malic acid, salts of malic acid or mixtures thereof.

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3) A process as claimed in claim 1 or claim 2 wherein the tea leaves are treated with the pH lowering agent during maceration or at the beginning of fermentation

4) A process as claimed in any preceding claim wherein the pH lowering agent is citric acid added in an amount of 0.05 to 5% by weight of the tea.